

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			OTHER : ☐																	

Work Order ID 146607

Thursday, May 19, 2016 2:57:38 PM

146607

Page 2

Item ID: D2805-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Stop

Start Date: 5/10/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.20

Quality Control

10 _____ 2116-6-24

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.30

Hand Finishing

DAS
15
9-89
(10) _____ 20160711
BEB

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.10

Quality Control

DAS
38
9-89
(10) _____ JUL 16 2016

DQA: _____ Date: _____



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 146607

Thursday, May 19, 2016 2:57:38 PM

146607

Page 3

Item ID: D2805-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Stop

Start Date: 5/10/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 5/19/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: _____	0.00							
160									
Packaging	Memo	0.10							
Packaging	LOCATION : GA								
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	1.00							
Quality Control									

10 DAS 6 9-89 JUL 15 2016

DAS 21 9-89 JUL 15 2016

DAS 21 9-89 JUL 15 2016

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Misidentified ☐	Past Due ☐																																																																

Picklist Print

Thursday, May 19, 2016 2:57:37 PM

Page 1

Work Order ID: 146607

146607

Parent Item: D2805-1

D2805-1

Parent Item Name: Stop

Start Date: 5/10/2016

Required Date: 5/19/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP: B00.11.14 Revised Finishing step to Acid etch and AlodineEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6B1.500X01.50
0

Purchased

No

100

f

30.6670

0.2625

2.763158

DAS
33
9-89

M6061T6B1 500X01 500

6061-T6 Bar 1.50 x 1.50

Location

Loc Qty

Loc Code

MAT004

30.667

M126043

30.667

2,125'

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY							
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER : _____							
Misidentified ☐	☐	Past Due								

DART AEROSPACE LTD		Work Order: 196607
Description: Stop		Part Number: D2805-1
Inspection Dwg: D2805 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.974	+/-0.010	2.973	/		Vern	Fx dy
0.240	+/-0.010	.239	/			
0.100 chamfer	+/-0.010	.100 x 45°	/			
1.420	+/-0.001	1.420	/			
1.125	+/-0.010	1.126	/			
0.250	+0.005/-0.000	.250	/			
0.250	+/-0.010	.251	/			
1.500	+/-0.010	1.499	/			
1.000	+/-0.010	1.000	/			
0.875	+0.001/-0.000	.8754	/			
Ø0.191	+0.005/-0.000	.191	/			
2.689	+/-0.010	2.689	/		↓	↓

DAS

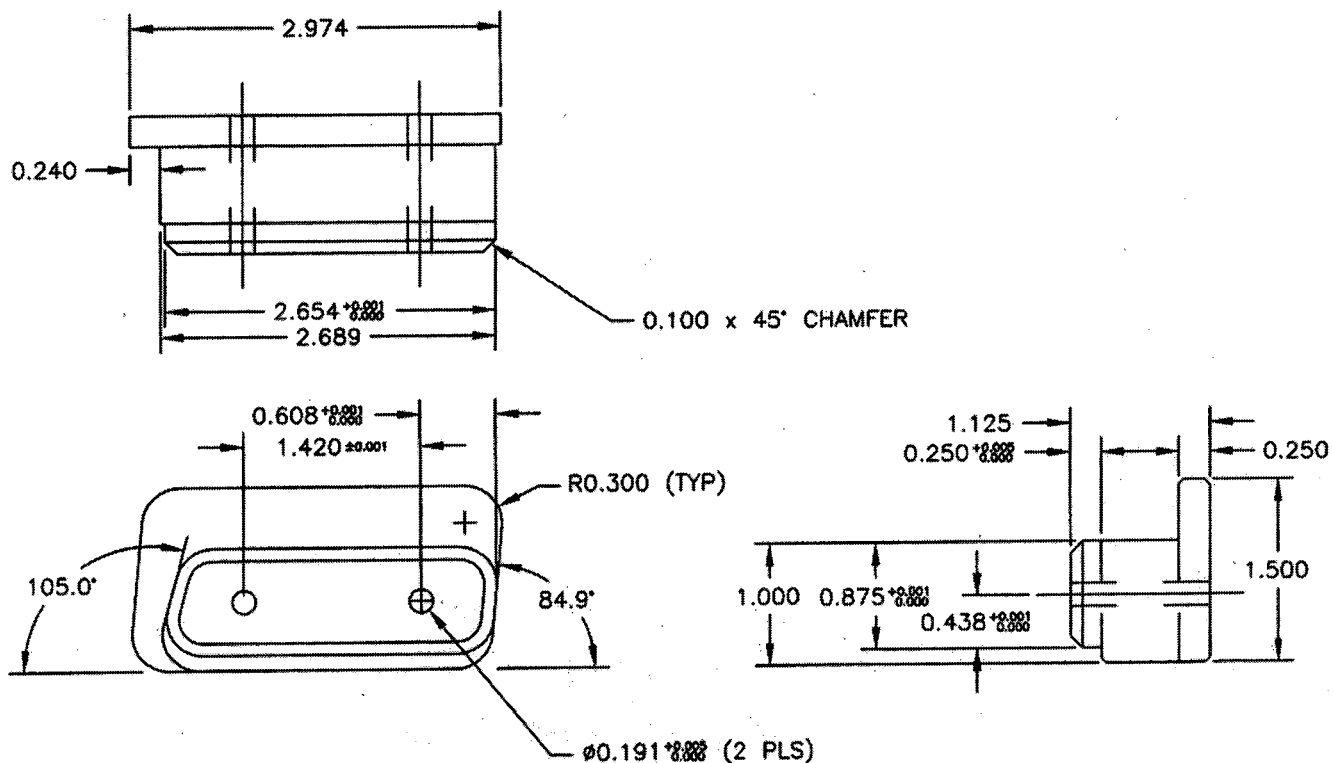
Measured by: 44 9-89	Audited by: SK	Preliminary Approval:
Date: 16-06-23	Date: 16-6-24	Date:

Rev	Date	Change	Revised by	Approved
A	05.04.26	New Issue	KJ/JLM	
B	07.03.21	Dimensions added	KJ/JLM	
C	10.06.04	0.438 dimension removed	KJ	



DESIGN	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2805	REV. B SHEET 1 OF 2
DATE 01.03.13		TITLE STOP	SCALE 2:3
A	00.10.31	NEW ISSUE	
B	01.03.13	ADD -3/-4	

RELEASED
01.03.16 #



D2805-1 (SHOWN)
D2805-2 (OPPOSITE)

BREAK ALL OUTSIDE EDGES 0.030 TO 0.060 UNLESS OTHERWISE NOTED.
BREAK ALL INSIDE EDGES 0.005 TO 0.015 UNLESS OTHERWISE NOTED.
MATERIAL: 6061-T6 (QQ-A-200/8) OR (QQ-A-250/11)
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

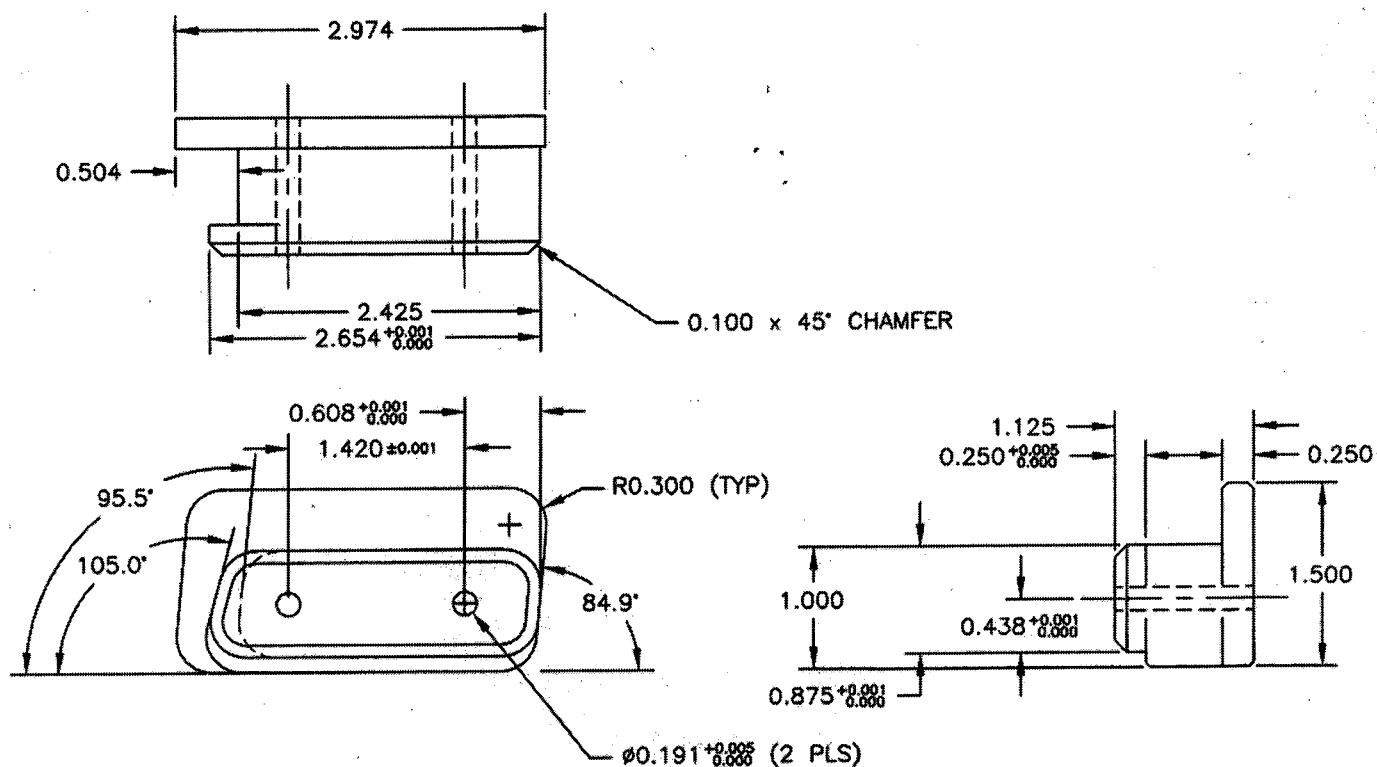
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DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2805	REV. B SHEET 2 OF 2
DATE 01.03.13		TITLE STOP	SCALE 2:3

RELEASED
01.03.16



D2805-3 (SHOWN)
D2805-4 (OPPOSITE)

BREAK ALL OUTSIDE EDGES 0.030 TO 0.060 UNLESS OTHERWISE NOTED.
BREAK ALL INSIDE EDGES 0.005 TO 0.015 UNLESS OTHERWISE NOTED.
MATERIAL: 6061-T6 (QQ-A-200/8) OR (QQ-A-250/11)
FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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